

SEQUENCE LISTING

<110> CHAO, Moses V.
KONG, Haeyoung

<120> A TRANSMEMBRANE PROTEIN AS A DOWNSTREAM TARGET OF NEUROTROPHIN AND
EPHRIN RECEPTOR TYROSINE KINASES, DNA ENCODING SAME AND MONOCLONAL
ANTIBODIES THERETO

<130> CHAO11A

<140> NOT YET ASSIGNED

<141> 2001-12-19

<150> 60/256,909

<151> 2000-12-21

<160> 8

<170> PatentIn version 3.1

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<212> DNA

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Tyr Lys Gly Arg Thr Asp Val Val Glu Leu Leu Leu Ser His Gly Ala
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Leu Lys Ser Glu Gly Phe Met Lys Val Leu Lys Cys Glu Val Glu Leu				
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Val Leu Gln Met Leu Asp Thr Val Arg Val Leu Phe Ser Lys Gly Pro				
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Glu Glu	Ser Trp Pro Ala	Cys Gln Lys Ala Tyr	Asn Leu Asn Arg	
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Thr Pro	Ser Thr Val Thr	Leu Asn Asn Asn Thr	Ala Pro Thr Asn	
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Arg Ala	Asn Gln Asn Phe	Asp Glu Ile Glu Gly	Ile Arg Glu Thr	
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Ser Gln	Val Ile Leu Arg	Pro Gly Pro Ser Pro	Asn Pro Thr Ala	
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Val Gln	Asn Glu Asn Leu	Lys Ser Met Ala His	Lys Arg Ser Gln	
1670		1675	1680	
Arg Ser	Ser Tyr Thr Arg	Leu Ser Lys Asp Ala	Ser Glu Leu His	
1685		1690	1695	
Ala Ala	Ser Ser Glu Ser	Thr Gly Phe Gly Glu	Glu Arg Glu Ser	
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Ile Leu				
1715				

Leu	Ala	Glu	Met	Ile	Ala	Thr	Leu	Ser	Asp	Ala	Cys	Glu	Arg	Glu	Phe	
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Gly	Phe	Leu	Ala	Thr	Arg	Leu	Phe	Arg	Val	Phe	Lys	Thr	Glu	Asp	Thr	
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Ile	Ser	Ile	Ala	Ser	Val	Val	Gly	Leu	Ala	Phe	Val	Leu	Asn	Cys	Arg	
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Thr	Trp	Trp	Gln	Val	Leu	Asp	Ser	Leu	Leu	Asn	Ser	Gln	Arg	Lys	Arg	
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Leu	His	Asn	Ala	Ala	Ser	Lys	Leu	His	Lys	Leu	Lys	Ser	Glu	Gly	Phe	
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Met	Lys	Val	Leu	Lys	Cys	Glu	Val	Glu	Leu	Met	Ala	Arg	Met	Ala	Lys	
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acc	att	gac	agc	ttc	act	cag	aat	cag	aca	agg	ctg	gtg	gtc	atc	atc	2479
Thr	Ile	Asp	Ser	Phe	Thr	Gln	Asn	Gln	Thr	Arg	Leu	Val	Val	Ile	Ile	
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Asp	Gly	Leu	Asp	Ala	Cys	Glu	Gln	Asp	Lys	Val	Leu	Gln	Met	Leu	Asp	
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Thr	Val	Arg	Val	Leu	Phe	Ser	Lys	Gly	Pro	Phe	Ile	Ala	Ile	Phe	Ala	
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Ser	Asp	Pro	His	Ile	Ile	Ile	Lys	Ala	Ile	Asn	Gln	Asn	Leu	Asn	Ser	
			810					815					820			
gtg	ctt	cgg	gat	tca	aat	ata	aat	ggc	cat	gac	tac	atg	cgc	aac	ata	2671
Val	Leu	Arg	Asp	Ser	Asn	Ile	Asn	Gly	His	Asp	Tyr	Met	Arg	Asn	Ile	
		825					830				835					
gtc	cac	ttg	cct	gtg	ttc	ctt	aat	agt	cgt	gga	cta	agc	aat	gca	aga	2719
Val	His	Leu	Pro	Val	Phe	Leu	Asn	Ser	Arg	Gly	Leu	Ser	Asn	Ala	Arg	
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Lys Phe Leu Val Thr Ser Ala Thr Asn Gly Asp Val Pro Cys Ser Asp	
855 860 865 870	
act aca ggg ata cag gaa gat gct gac aga aga gtt tca cag aac agc	2815
Thr Thr Gly Ile Gln Glu Asp Ala Asp Arg Arg Val Ser Gln Asn Ser	
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Leu Gly Glu Met Thr Lys Leu Gly Ser Lys Thr Ala Leu Asn Arg Arg	
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Asp Thr Tyr Arg Arg Arg Gln Met Gln Arg Thr Ile Thr Arg Gln Met	
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Ser Phe Asp Leu Thr Lys Leu Leu Val Thr Glu Asp Trp Phe Ser Asp	
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Ile Ser Pro Gln Thr Met Arg Arg Leu Leu Asn Ile Val Ser Val Thr	
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Gly Arg Leu Leu Arg Ala Asn Gln Ile Ser Phe Asn Trp Asp Arg Leu	
955 960 965	
gct agc tgg atc aac ctt act gag cag tgg cca tac cgg act tca tgg	3103
Ala Ser Trp Ile Asn Leu Thr Glu Gln Trp Pro Tyr Arg Thr Ser Trp	
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ctc ata tta tat ttg gaa gag act gaa ggt att cca gat caa atg aca	3151
Leu Ile Leu Tyr Leu Glu Glu Thr Glu Gly Ile Pro Asp Gln Met Thr	
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Leu Lys Thr Ile Tyr Glu Arg Ile Ser Lys Asn Ile Pro Thr Thr	
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Asp Val Lys Val Phe Leu Pro Cys Thr Val Asn Leu Asp Pro Lys	
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Leu Arg Glu Ile Ile Ala Asp Val Arg Ala Ala Arg Glu Gln Ile	
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Cys	Asn	Ile	Asp	Glu	Leu	Lys	Lys	Glu	Met	Asn	Met	Asn	Phe	Gly	
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cca Pro	agt Ser 1465	gac Asp	gag Glu	gat Asp	gaa Glu	tct Ser 1470	ggc Gly	aca Thr	gaa Glu	gaa Glu	tca Ser 1475	gat Asp	aac Asn	act Thr	4591
cca Pro	ctg Leu 1480	ctc Leu	aaa Lys	gat Asp	gac Asp	aaa Lys 1485	gac Asp	aga Arg	aaa Lys	gcc Ala	gaa Glu 1490	ggg Gly	aaa Lys	gta Val	4636
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<212> PRT
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<400> 4

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 35 40 45

Gly Asn Leu Glu Ile Val Lys Glu Leu Ile Lys Asn Gly Ala Asn Cys
 50 55 60

Asn Leu Glu Asp Leu Asp Asn Trp Thr Ala Leu Ile Ser Ala Ser Lys
 65 70 75 80

Glu Gly His Val His Ile Val Glu Glu Leu Leu Lys Cys Gly Val Asn
 85 90 95

Leu Glu His Arg Asp Met Gly Gly Trp Thr Ala Leu Met Trp Ala Cys
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Tyr Lys Gly Arg Thr Asp Val Val Glu Leu Leu Leu Ser His Gly Ala
 115 120 125

Asn Pro Ser Val Thr Gly Leu Gln Tyr Ser Val Tyr Pro Ile Ile Trp
 130 135 140

Ala Ala Gly Arg Gly His Ala Asp Ile Val His Leu Leu Leu Gln Asn
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Gly Ala Lys Val Asn Cys Ser Asp Lys Tyr Gly Thr Thr Pro Leu Val
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Trp Ala Ala Arg Lys Gly His Leu Glu Cys Val Lys His Leu Leu Ala
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Met Gly Ala Asp Val Asp Gln Glu Gly Ala Asn Ser Met Thr Ala Leu
 195 200 205

Ile Val Ala Val Lys Gly Gly Tyr Thr Gln Ser Val Lys Glu Ile Leu

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Lys 225	Arg	Asn	Pro	Asn	Val 230	Asn	Leu	Thr	Asp	Lys 235	Asp	Gly	Asn	Thr	Ala 240
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Glu	Thr	Pro	Leu 340	Ile	Lys	Ala	Thr	Lys 345	Met	Arg	Asn	Ile	Glu 350	Val	Val
Glu	Leu	Leu 355	Leu	Asp	Lys	Gly	Ala 360	Lys	Val	Ser	Ala	Val 365	Asp	Lys	Lys
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Ala 385	Glu	Leu	Leu	Leu	Arg 390	Asn	Pro	Lys	Asp	Gly 395	Arg	Leu	Leu	Tyr	Arg 400
Pro	Asn	Lys	Ala	Gly 405	Glu	Thr	Pro	Tyr	Asn 410	Ile	Asp	Cys	Ser	His 415	Gln
Lys	Ser	Ile	Leu 420	Thr	Gln	Ile	Phe	Gly 425	Ala	Arg	His	Leu	Ser 430	Pro	Thr
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Ala Asp Ile Leu Ser Glu Pro Thr Met Gln Pro Pro Ile Cys Val Gly
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Leu Tyr Ala Gln Trp Gly Ser Gly Lys Ser Phe Leu Leu Lys Lys Leu
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Glu Asp Glu Met Lys Thr Phe Ala Gly Gln Gln Ile Glu Pro Leu Phe
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Gln Phe Ser Trp Leu Ile Val Phe Leu Thr Leu Leu Leu Cys Gly Gly
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Leu Gly Leu Leu Phe Ala Phe Thr Val His Pro Asn Leu Gly Ile Ala
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Val Ser Leu Ser Phe Leu Ala Leu Leu Tyr Ile Phe Phe Ile Val Ile
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Tyr Phe Gly Gly Arg Arg Glu Gly Glu Ser Trp Asn Trp Ala Trp Val
545 550 555 560

Leu Ser Thr Arg Leu Ala Arg His Ile Gly Tyr Leu Glu Leu Leu Leu
565 570 575

Lys Leu Met Phe Val Asn Pro Pro Glu Leu Pro Glu Gln Thr Thr Lys
580 585 590

Ala Leu Pro Val Arg Phe Leu Phe Thr Asp Tyr Asn Arg Leu Ser Ser
595 600 605

Val Gly Gly Glu Thr Ser Leu Ala Glu Met Ile Ala Thr Leu Ser Asp
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Ala Cys Glu Arg Glu Phe Gly Phe Leu Ala Thr Arg Leu Phe Arg Val
625 630 635 640

Phe Lys Thr Glu Asp Thr Gln Gly Lys Lys Lys Trp Lys Lys Thr Cys
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Cys Leu Pro Ser Phe Val Ile Phe Leu Phe Ile Ile Gly Cys Ile Ile
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Ser Gly Ile Thr Leu Leu Ala Ile Phe Arg Val Asp Pro Lys His Leu

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Trp Gln Ser Gln Thr Arg Arg	Thr Pro Ser Leu Ser	Ser Leu Asn		
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Ser Gln Leu Glu Gly Gly Pro	Gly Ser Thr Thr Ile	Ser Gly Arg		
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Glu Pro Lys Pro Asp Asp Gly Arg Lys Ser Phe Leu Met Lys Arg
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Gly Asp Val Ile Asp Tyr Ser Ser Ser Gly Val Ser Thr Asn Asp
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Pro Ser Thr Val Thr Leu Asn Asn Asn Ser Ala Pro Ala Asn Arg
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Arg Phe Gly Asn Trp Ile Leu Thr Ser Ala Val Arg Ser Gly Asn Ala	
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Ala Ile Val Arg Met Ile Leu Asp Lys Phe Ala Asp Ile Asn Cys Gln	
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Lys Asn Lys Asp Gly Glu Thr Pro Leu Leu Arg Ala Ala Lys Cys Arg	
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His Val His Leu Cys Thr Tyr Leu Met Ser Phe Gly Ala Lys Leu Ala	
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Pro Val Arg Leu Phe Cys Cys Met Lys Pro Pro Tyr Pro Gly Ile His	
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Phe	Gln	Asn	Gln	Gln	Thr	Val	Gln	Arg	Arg	Gly	Gly	Asp	Asp	Phe	
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Ala Lys Leu Lys Glu Ala Met His Ser Phe Ser Arg Asp Trp Leu Asp		
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785 790 795 800

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Ala Leu Ser Gly Thr Glu Leu Thr Gly His Asp Tyr Leu Lys Asn Ile
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Ile Ser Met Pro Phe Tyr Leu His Asn Ser Ala Leu Arg Gln Leu Gln
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Ser Lys Leu Arg Glu Lys Arg Glu Ser Met Ala Glu Trp Lys Glu Arg
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Phe Lys Arg Gln Asp Thr Phe Tyr Gly Ser His Leu Ser Leu Arg Glu

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Asn	Arg	Ser	Val	Ser	Ser	His	Ser	Leu	Gln	Ser	Leu	Ser	Thr	Leu	
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Met	His														

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Glu	Ser	Ser	Ser	Leu	Pro	Met	Val	Val	Val	Ile	Pro	Asn	Ala	Ser	
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Gln Tyr Ile Asp Asn Asn Asp Ile Ser Gly Leu Arg Ala Ile Leu Asp
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Leu Met Val Val Ala Gly Arg Gly Leu Thr Ala Phe Val Arg Glu Phe
65 70 75 80

Ala Leu Leu Cys Ala Ser Arg Asn Gly His Leu Asp Val Val Gln Leu
100 105 110

Thr Ser Leu Met Trp Ala Ala Tyr Arg Gly His Thr Glu Leu Val Arg
130 135 140

145 150 155 160

Leu Gly Ala Leu Leu Trp Ala Ala Gly Arg Gly Tyr Lys Asp Ile Val
165 170 175

Glu Leu Leu Val Gln Arg Gly Ala Lys Val Asn Val Gly Asp Lys Tyr
180 185 190

Gly Thr Thr Ala Leu Val Trp Ala Cys Arg Arg Gly Asn Val Glu Ile
195 200 205

Val Asp Thr Leu Leu Lys Ala Gly Ala Asn Val Asp Thr Ala Gly Met
210 215 220

Tyr Ser Trp Thr Pro Leu Leu Val Ala Ala Ala Gly Gly His Thr Asp
225 230 235 240

Cys Val Ser Ser Ile Leu Glu Lys Lys Pro Asn Val Asn Ala Leu Asp
245 250 255

Lys Asp Gly Met Thr Ala Leu Cys Ile Ala Ser Arg Glu Gly Phe Gln
260 265 270

Asp Ile Ala Ala Ser Leu Ile Ala Ala Gly Ala Tyr Ile Asn Ile Gln
275 280 285

Asp Arg Gly Ala Asp Thr Pro Leu Ile His Ala Val Lys Ala Gly His
290 295 300

Arg Thr Val Val Glu Ala Leu Leu Lys Lys His Ala Asp Val Asp Ile
305 310 315 320

Gln Gly Lys Asp Arg Lys Thr Ala Ile Tyr Thr Ala Val Glu Lys Gly
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His Thr Pro Ile Val Lys Leu Leu Leu Ala Thr Asn Pro Asp Leu Glu
340 345 350

Ser Ala Thr Lys Asp Gly Asp Thr Pro Leu Leu Arg Ala Val Arg Asn
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Arg Asn Leu Glu Ile Val His Leu Leu Leu Asp Arg Lys Ala Lys Val
370 375 380

Thr Ala Ser Asp Lys Arg Gly Asp Thr Cys Leu His Ile Ala Met Arg
385 390 395 400

Ala Arg Ser Lys Thr Ile Val Glu Ala Leu Leu Arg Asn Pro Lys His
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Ser Gln Leu Leu Tyr Arg Ala Asn Lys Ala Gly Glu Thr Pro Tyr Asn
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Ile Asp Ser Leu His Gln Lys Thr Ile Leu Gly Gln Val Phe Gly Ala
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Arg Arg Leu Asn Thr Asn Glu Asp Ser Glu Gly Met Leu Gly Tyr Glu
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Thr Pro Ile Thr Val Gly Leu Tyr Ala Lys Trp Gly Ser Gly Lys Ser
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Phe Leu Leu Asn Lys Leu Arg Asp Glu Met Asn Asn Phe Ala Arg Gln
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Trp Ala Glu Pro Pro Ile Arg Thr Ser Gly Leu Leu Phe Ile Val Cys
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Leu His Val Ala Leu Leu Ile Gly Thr Ile Val Gly Leu Ser Thr Trp
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Ser Ala Val Val Gly Val Ser Ala Ala Val Gly Phe Leu Leu Leu Ala
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Tyr Leu Leu Leu Ala Ala Val Arg Tyr Cys Asn Tyr Gln Met Asp Met
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Gln Trp Ala Tyr Ser Val Gln His Gly Leu Glu Lys Arg Met Thr Arg
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Leu Arg Leu Ile Leu Gln Val Ala Phe Cys His Pro Pro Gly Pro Gln
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Ser Asp Ser Gln Ala Lys Pro Val Arg Phe His Phe Ala Glu Ala Asn

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 Ser Ala Ser Pro Thr Gly Asp Gly Ala Val Ala His Met Leu Ala Ala
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 Tyr Arg Ala Phe Arg Pro Lys Cys Leu Lys Val Asp Val Gly Trp Arg
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 Trp Arg Arg Met Cys Cys Ile Pro Ile Val Leu Ile Phe Glu Leu Ala
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 Leu Val Thr Val Val Thr Gly Ile Ser Leu Thr Val Ala Tyr Phe Thr
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 Ser Ser Pro Asn Arg Pro Phe Val Leu Leu Ile Ser Val Asp Pro His
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Val Tyr Leu Gln Asn Ser Gly Leu Arg Lys Val Gln Arg Ala Gln Met
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Thr Ala Leu Leu Phe Lys Arg Ser Gly Gly Gly Asp Tyr Gln Thr Asp
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Asp Gly Pro Thr Leu Gly His Ser Val Ser Ala Arg Arg Leu Ser Asn
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Ala Ser Glu Ile Ile Ser Ser Gln Glu Lys Leu Arg Gly Pro Ala Arg
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Gly Gly Gly Gly Lys Lys Leu Arg Leu Ser Glu Ser Val Ala Ser Ser
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Thr Gly Ser Asn Leu His Arg Leu Gly Gln Asn Pro Gln Thr Val Leu
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Asp Leu Ser Arg Ile Val Leu Thr Asp Asp Tyr Phe Ser Asp Val Asn
965 970 975

Pro Arg Ser Met Arg Arg Leu Met Asn Val Ile Tyr Ile Thr Val Arg
980 985 990

Leu Leu Lys Ala Phe Gln Ile Glu Phe Ser Trp Tyr Arg Leu Ser Ser
995 1000 1005

Trp Ile Asn Leu Thr Glu Gln Trp Pro Leu Arg Ala Ser Met Ile
1010 1015 1020

Val Leu His His Asp Gln Phe Met Asp Ser Asn Ala Asp Glu Ser
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Val Ser Leu Gln Ser Val Tyr Glu Lys Leu Arg Pro Lys Leu Ala
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Tyr Leu Arg Glu Ala Ala Pro Leu Leu Glu Leu Asp Arg Asp Glu
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Arg Lys Leu Asp Ala Phe Leu Gln Leu His Lys Ser Asp Leu Leu

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